



City of San Diego
Environmental Services Department

Financing Solar Projects

Presentation to Solar America
Cities

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Deputy Director





City of San Diego

- Population: 1,311,162
- Land Area: 342 square miles
- 265,000,000 kWh consumed annually in 1,400 municipal facilities
- San Diego generates 50% of its electricity via landfill/digester gases, solar systems, and hydroelectric units and sells 25% to local utility.



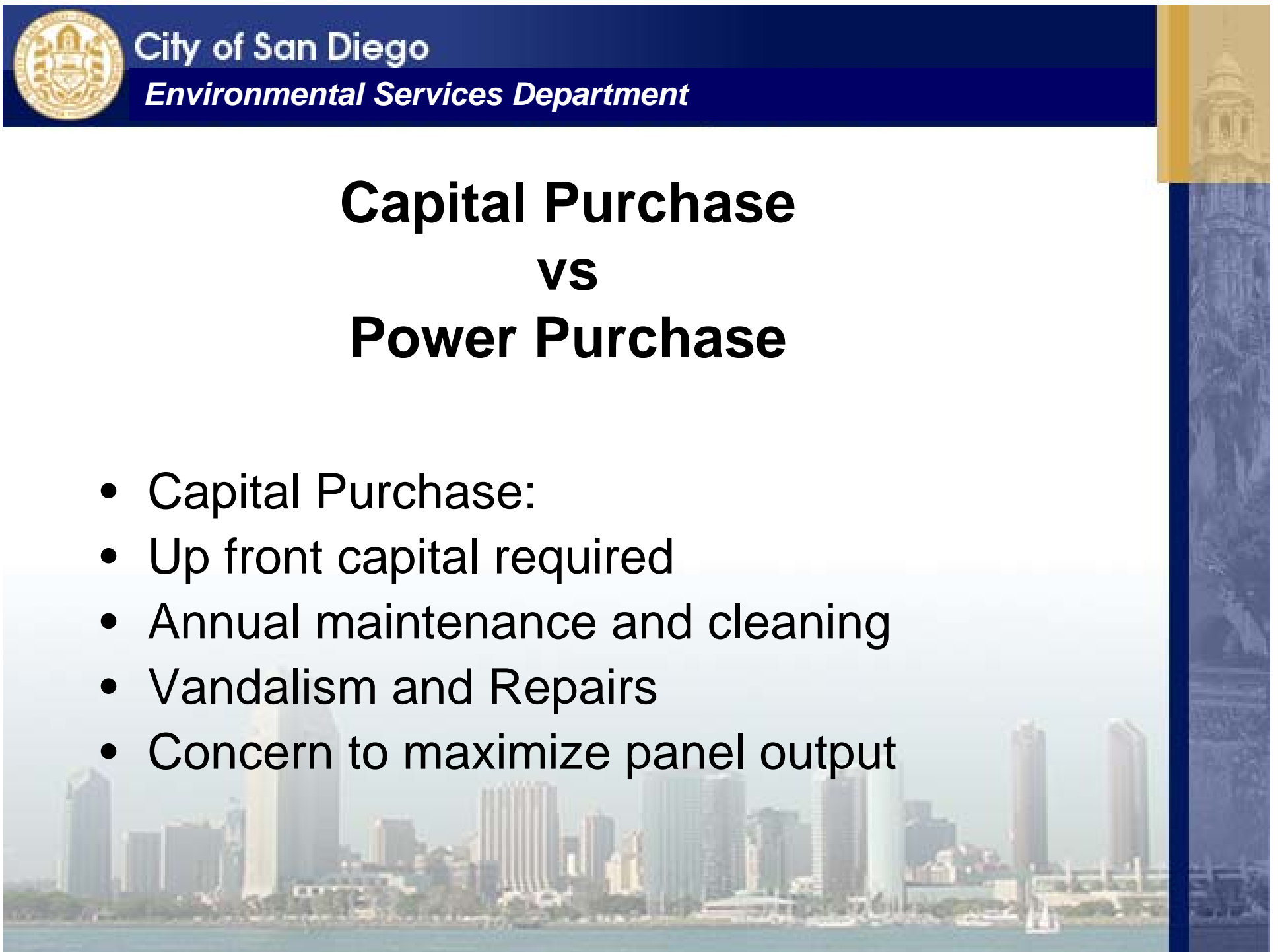
What can a City Do?

- Identify How, When, and Where energy used in municipal facilities.
- Establish sustainable building policies for long term improvement.
- Leverage capital costs: CEC loans, Utility Partnerships, and Power Purchase Agreements.
- Support and participate in legislation.



Capital Purchase vs Power Purchase

- Capital Purchase:
- Up front capital required
- Annual maintenance and cleaning
- Vandalism and Repairs
- Concern to maximize panel output



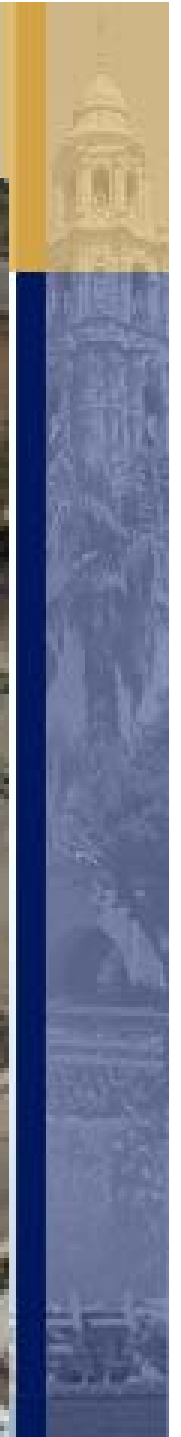


Power Purchase Agreement (PPA)

- Developer designs, constructs, owns, operates and maintains solar system
- City provides site license and purchases all power produced
- Energy at fixed cost with Escalator and Degradation Factor
- Renewable Energy Credits Remain with Facility Owner
- Twenty year term



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Alvarado Solar



1.9 Million kWh Annually

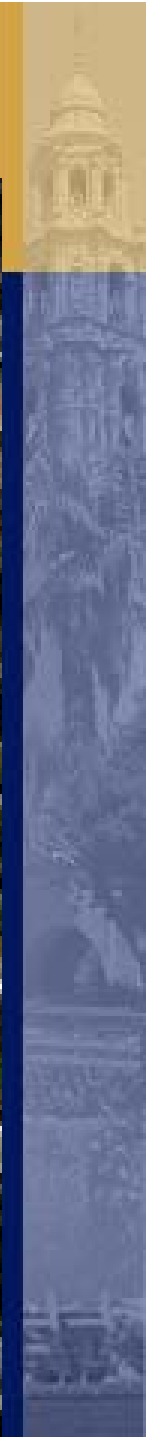


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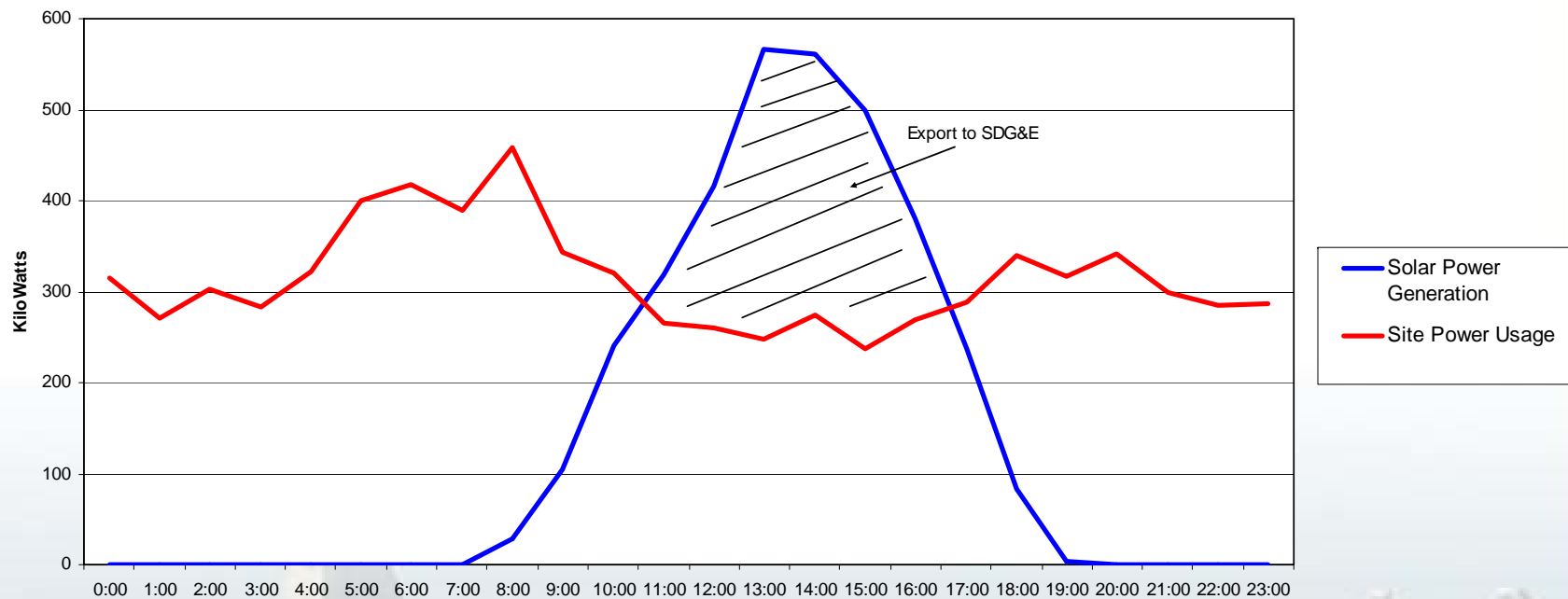
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Site Power Profile

Alvarado Project Power Usage
and Solar Power Generation





CEC Loans

- \$40M available for energy efficiency projects
- Application maximum \$3M
- Simple Payback 9.8 years
- Interest rate 4.5%
- No liens – Requires Promissory Note
- Repayment over 15 years with savings from energy projects
- Improvements only in municipal owned/occupied facilities (no leased space)



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Ridgehaven Rooftop





MOC III Facility

- Metropolitan Wastewater Department Operations Center
- 30-kilowatt rooftop array.





Utility Partnerships

- Incentives and Rebates
- Technical Training
- Community Outreach
- Utility owned Solar Panel installation at R.H. Fleet Space Center in Balboa Park to relieve transmission congestion





Sustainable Building Policy

- City of San Diego new facilities and major remodels designed to LEED “Silver”
- Expedited permit process
 - Self generation with renewable energy
 - Exceed Title 24 energy requirements

